

PRESENTATION TO THE FRANKLIN CITY COUNCIL  
CONCERNING PRELIMINARY ENVIRONMENTAL STUDIES  
AT THE ABANDONED SYSTECH SITE

Franklin, Ohio

US EPA RECORDS CENTER REGION 5



469072

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## PURPOSE OF STUDY

- 
- 0 PRELIMINARY ENVIRONMENTAL SAMPLING STUDY OF THE ABANDONED SYSTECH SITE
- BALANCE STUDY COSTS WITH PERCEIVED RISK
  - IDENTIFY THE PRESENCE OF GROSS CONTAMINATION
  - PROVIDE A DATA BASE FOR ADDRESSING, IN A PRELIMINARY MANNER, THE CITY'S ENVIRONMENTAL CONCERNS (BUT MAINTAINING FINANCIAL BURDEN AS SMALL AS POSSIBLE)
- 0 THE STUDY WAS NOT AN IN-DEPTH INVESTIGATION OF CONTAMINATION AT THE SITE

## TASKS PERFORMED

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- 0 DELINEATE THOSE PORTIONS OF THE SITE USED BY SYSTECH AND SELECT LOCATIONS FOR BORINGS LIKELY TO HAVE BEEN CONTAMINATED BY PLANT OPERATIONS (CONSIDERED SYSTECH OPERATIONS AND GROUND-WATER FLOW)
- 4 EXISTING MONITORING WELLS ESTABLISHED BY MIAMI CONSERVANCY DISTRICT SAMPLED
  - 3 NEW SOIL BORINGS RANGING IN DEPTH FROM 11.5 TO 16.5 FEET, AND 1 SURFACE SOIL SAMPLING LOCATION
- 0 CHEMICAL ANALYSIS OF 16 SOIL SAMPLES BY APPROVED USEPA METHODS
- 39 VOLATILE ORGANIC COMPOUNDS USING THE HEAD SPACE METHOD
  - PCBs AT SURFACE AND DEPTH RANGE 2.5 - 4 FEET
- 0 CHEMICAL ANALYSIS OF WATER SAMPLES BY APPROVED USEPA METHODS
- PRIORITY POLLUTANT LIST OF VOLATILE ORGANIC COMPOUNDS
  - 8 METALS LISTED IN THE PRIMARY DRINKING WATER STANDARDS (AND USED IN THE ANALYSIS OF TOXIC HAZARDOUS WASTES)
  - PCBs and OTHER ORGANIC CHEMICALS THOUGHT TO HAVE BEEN BROUGHT TO THE SITE (PCBs WERE NOT KNOWN TO HAVE BEEN TREATED ON SITE)

## TASKS PERFORMED (CONTINUED)

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- 0 PREPARED LOGS OF BORINGS INSTALLED BY S&ME AND PREPARED REPORTS OF WATER SAMPLING (MAY 30, 1986) AND SOIL SAMPLING (AUGUST 21, 1986)
- 0 DISCUSSED RESULTS OF OUR ANALYSES WITH REPRESENTATIVES OF THE CITY OF FRANKLIN (SEPTEMBER 18, 1986)
- CITY MANAGER, ENGINEER, LAW DIRECTOR, AND OTHERS
  - OTHERS IN ATTENDANCE INCLUDED REPRESENTATIVES OF THE MIAMI CONSERVANCY DISTRICT (MCD) AND OHIO EPA (OEPA)

## SUMMARY OF PERTINENT INFORMATION

- 0 SITE OWNERSHIP AND USE (DETERMINES PARTIES POTENTIALLY RESPONSIBLE FOR SITE CLEAN-UP)

PRP's  
① CITY WAS THE FORMER OWNER AND USED THE SITE FOR A SEWAGE TREATMENT PLANT

PRP - AFTER CONSTRUCTION OF THE NEW REGIONAL PLANT, THE PROPERTY WAS DEEDED TO THE MCD

PRP - SYSTECH LEASED THE PROPERTY FROM MCD AND OPERATED A LIQUID ORGANIC RECOVERY PLANT AND AN IN-HOUSE RESEARCH FACILITY

- 0 CONTAMINATION AT THE SITE IS NOT UNIFORM (IT IS VARIABLE WITH RESPECT TO LOCATION, DEPTH, AND CHEMICAL)

- 0 MOST CHEMICALS ANALYZED WERE FOUND AT LOW LEVELS OR AT CONCENTRATIONS BELOW THE LEVEL OF DETECTION

- 0 ONLY A SMALL NUMBER OF CHEMICAL COMPOUNDS WERE OBSERVED AT CONCENTRATIONS THAT COULD POTENTIALLY PRESENT A MODERATE RISK TO PUBLIC HEALTH AND SAFETY UNDER PRESENT LAND-USE CONDITIONS AT AND NEIGHBORING THE SYSTECH SITE

SUMMARY OF PERTINENT INFORMATION (CONTINUED)  

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- 0 THE FULL EXTENT OF CONTAMINATION AND RISKS TO PUBLIC HEALTH AND SAFETY CAN NOT BE ASSESSED WITHOUT ADDITIONAL FIELD DATA
  - AT THE SYSTECH SITE
  - IN AREAS SURROUNDING THE SITE
- 0 IF THE LAND-USE AT AND NEIGHBORING THE SITE SHOULD CHANGE, A HEALTH ASSESSMENT MAY BE APPROPRIATE TO EVALUATE RISKS TO HUMAN HEALTH AND THE ENVIRONMENT
- 0 THE MCD OWNS THE SITE AND CONTROLS USE OF THE LAND AT THE SITE

## SUMMARY OF PERTINENT INFORMATION

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0 CONTAMINATION AT THE ABANDONED SYSTECH SITE IS VERY UNLIKELY TO ADVERSELY AFFECT THE CITY'S DRINKING WATER SUPPLY

- THE NEAREST WELL IS ABOUT ONE HALF MILE AWAY AND ACROSS 2 RIVERS
- THE SITE LIES HYDROLOGICALLY BELOW THE CITY WELLS AND CONTAMINANTS AT THE SITE WILL NOT FLOW "UP HILL" TO THESE WELLS
- THE AREA INFLUENCED BY GROUNDWATER WITHDRAWAL FROM EACH CITY WELLS IS VERY SMALL BECAUSE THE RIVERBED AQUIFER HAS VERY GOOD WATER PRODUCING PROPERTIES
- THE CITY ROUTINELY MONITORS THE WATER QUALITY OF THE CITY WATER WELLS FOR CHEMICAL COMPOUNDS DETECTED AT THE SITE

0 AT THE SEPTEMBER 18TH MEETING THE MCD REPRESENTATIVES INDICATED THAT A RELEASE FROM AN UP-STREAM FACILITIES OR TRANSPORTATION ACCIDENT, WHICH REACH THE GROUNDWATER, WOULD POSE A GREATER THREAT TO THE CITY'S WATER SUPPLY THAN THE ABANDONED SYSTECH SITE

POTENTIAL ADDITIONAL STUDIES/REMEDICATION

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- 0 CONTINUE TO LIMIT SITE ACCESS AND CONTROL LAND-USE TO APPROPRIATE ACTIVITIES
- 0 PERFORM HEALTH ASSESSMENT IF LAND-USE CHANGES AT OR IN THE VICINITY OF THE SITE
- 0 GROUNDWATER MONITORING
  - CONTINUE MONITORING AT EXISTING ONSITE WELLS
  - INSTALL AND MONITOR ADDITIONAL WELLS ON PROPERTY TO DETERMINE CONTAMINANTS MIGRATING ONTO THE SITE FROM UPGRADIENT SOURCES
  - INSTALL AND MONITOR ADDITIONAL WELLS OFF THE PROPERTY TO DETERMINE THE EXTENT OF CONTAMINATION MIGRATING OFFSITE, IF ANY



## POTENTIAL ADDITIONAL STUDIES/REMEDATION (CONTINUED)

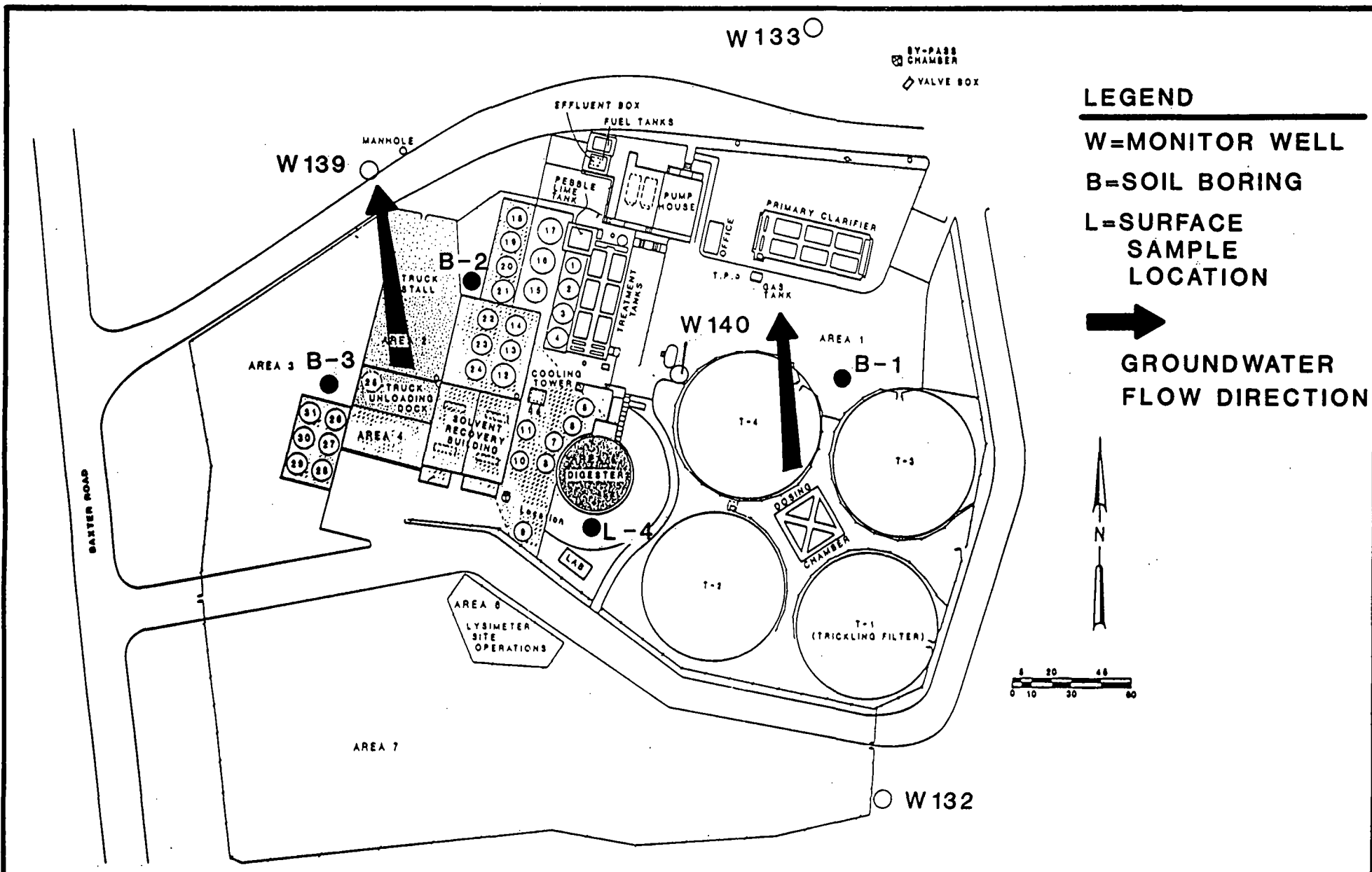
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## ASSESS SITE REMEDIATION ALTERNATIVES

- AMOUNT OF CLEANUP EXPECTED TO BE ACHIEVED
- TIME REQUIRED TO ACHIEVE CLEANUP GOALS
- ABILITY TO IMPLEMENT ALTERNATIVE
- COSTS (INITIAL INVESTMENT AND OPERATING/MAINTENANCE COSTS)
- PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENTAL

## 0 POTENTIAL SITE REMEDIATION ALTERNATIVES (NOT ASSESSED AS NOTED ABOVE)

- PUMP SITE WELLS TO FURTHER REDUCE CONTAMINATION;
  - + TREAT THE WATER IN THE WASTEWATER TREATMENT FACILITY
  - + TREAT THE WATER BY AIR STRIPPING
- ENHANCED VOLATILE ORGANIC COMPOUND RECOVERY (VACUUM EXTRACTION) AT AREAS OF HIGHER CONTAMINATION



# **LEGEND**

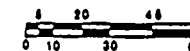
W=MONITOR WELL

B=SOIL BORING

L=SURFACE  
SAMPLE  
LOCATION



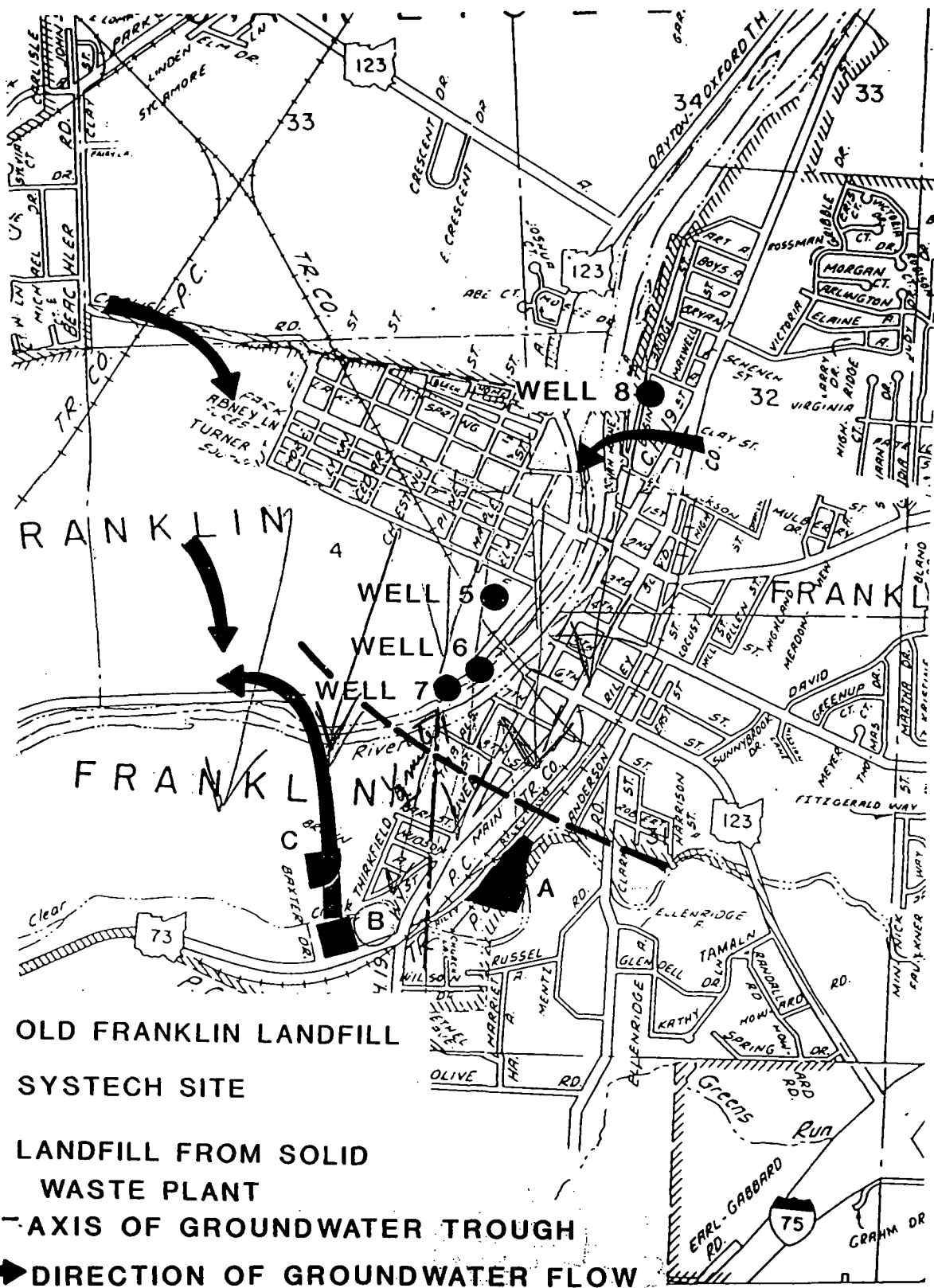
GROUNDWATER  
FLOW DIRECTION



October 6, 1968

Systech Site Plan

**SOIL & MATERIAL ENGINEERS INC.**  
CINCINNATI, OHIO



Location of Systech site with respect to the city of Franklin wells.

**SOIL & MATERIAL ENGINEERS INC.**  
**CINCINNATI, OHIO**  
 October 6, 1986